

Beginner's Corner

Carnivorous or Insectivorous Plants

by George Ashley

What are they? First they are a group of plants that are generally found growing in swamps or moist places, although this is not strictly so, as many are found in quite dry, stony, and sandy areas. They are found from sea level to quite high altitudes from the edge of the arctic circle to the tropics; indeed many are often covered with snow in the winter when they become dormant. They all have one thing in common, they trap and utilize the bodies of insects, in some cases small mammals and small birds. This is accomplished by various methods according to the various modified leaves developed by the different species of plants.

The first group of plants adopt the sticky fly paper type of trap. The upper surface of these leaves are covered with thin, hairy tentacles tipped with sticky red glands. The prey on coming in contact with these sticky glands becomes hopelessly trapped and the tentacles slowly envelope their prey. The soft body parts are dissolved by substances from the glands and finally absorbed by the plants. There are a number of plants that adopt this method of trapping their victims.

The Butterworts (*Pinguicula*) from the United States and the Northern Hemisphere, *Drosophyllum* from Portugal and *Byblis*, Australia, to the *Drosera* which is world wide, some 90 different Sundews are found in the world, of which 56 have been recorded in Australia. Four fifths of these are confined to the south western corner of Western Australia, nine species being found in Queensland, six within a few miles of Brisbane. The *Drosera* (Sundews) are found in many shapes and sizes from the small *Pygmaea* 1 to 2 cm across, to the large *Drosera*

gigantea 2 up to 100 centimetres tall which is somewhat like a small shrub.

Some of these *drosera* grow from tubers from the size of a small pea up to a tuber 2 to 2½ centimetres in diameter. Some tubers are a deep red in colour and some are white. Some of the *Drosera* are climbing plants often several feet in length.

Flowers range from white, through pink to a mauve colour, some yellow to a deep orange. Some are very small; one, the *Drosera pygmaea*, has a flower barely 3 mm across, this has only four petals; all other *Drosera* have five petals. One other *Drosera* from West Australia, one of the *Pygmaea* ones, has a lovely orange flower at least two centimetres across.

The leaves of *Drosera* also vary quite a bit from long lance shaped leaves as in *Drosera adelae* from North Queensland to small kidney shaped leaves on climbing erect types; others have fan shaped leaves.

Some propagate by runners like a strawberry plant, some grow small plantlets from detached leaves, others form tubers on the ends of advent roots, but mostly from seed. Some of the rosetted type produce their flowers before they grow their leaves; some have single flowers only; others a much branched stem with many flowers.

The next group has their leaves modified into a very effective trap such as the well known Venus Fly Trap of Carolina, U.S.A. The leaf is divided up the middle with a midrib. The edges of the leaves have spines, also the inner surface has several sensitive trigger hairs which are activated by the victim when it crawls over the surface. The two halves then close entrapping the victim

where the soft parts of the body are dissolved by fluids excreted by glands. This is then absorbed through the leaves into the plants; the leaves can then reset themselves and the hard undigested portions of the insect are discarded, being blown away by the breeze.

There is also a plant found in the freshwater swamps and lagoons of Northern Queensland, an Australian known as *Aldrovanda* or the Water-Wheel plant. It is completely submerged but it also catches its prey in a manner very similar to the Venus Fly Trap. There are also many different types of *Utricularia* in Australia. These are plants both aquatic and terrestrial that also catch their prey using a very efficient trap in the form of small bladders fitted with a very ingenious trap door. These plants also have some very lovely flowers somewhat like small snap dragons and are of many colours, pink, red, yellow, mauve or a deep purple, or blue. A large water hole covered with these flowers can be quite breath-taking.

The last group of plants is the Pitcher Plants. First we have the *Sarracenia* from America; these are bog plants and have a very large and colourful flower from yellow, bright red, orange or purple depending on the species. The leaves of these plants are modified into long narrow tubes and can be up to a metre high. The leaves of the prostrate types reach only a few centimetres in length. The leaves are often brightly coloured and some are beautifully veined, they are however a cunning trap to the unwary victims. They have scent glands which attract the victim to the edge of the pitcher where they can go so far and then fall down into the digestive juices, where they are prevented from climbing out by downward pointed hairs.

Next the *Nepenthes* also known as pitcher plants. These have the midrib of their leaves extended which develops into a pitcher complete with a lid. They also catch their prey like the *Sarracenia*s and the pitchers range from very small to very large sizes, capable of holding up to a litre of liquid and these can be of many shapes and colours. *Nepenthes* can be of prostrate form to large vines often twenty or thirty feet

in length climbing the trees in the rainforest where many of them grow.

Nepenthes have male and female flowers on different plants so to have seeds, one must have male and female plants flowering at the same time. They are also found growing from sea level to elevations of up to 2,650 metres in the cool moist heights of the mountains to the hot humid conditions of the tropical coasts. They are found from Madagascar to Southern China down to North Australia.

Lastly, we have the West Australian pitcher plant *Cephalotus follicularis* found in the South Western corner of West Australia. This is unique in being the only species and found nowhere else in the world. It is a small plant with rosettes of small pitchers close to the ground.

Culture: All carnivorous plants can be grown in a mixture of peat moss, sphagnum moss, some of the *Drosera* in sand with a little moss, kept moist, but must have good drainage using plenty of charcoal.

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